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APPLICATION N	Ю.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
10/618,808		07/14/2003	Bing Zhou	15913.39.1	5792
22913	7590	06/29/2005		EXAMINER	
WORKMAN NYDEGGER (F/K/A WORKMAN NYDEGGER & SEELEY)				LANGEL, WAYNE A	
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SALT LA	KE CITY,	UT 84111	DATE MAILED: 06/29/2005	5	

Please find below and/or attached an Office communication concerning this application or proceeding.



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S.N. 10/618808

Proposed Claim Amendments

1. (Proposed Amendment) A supported reactive catalyst having a controlled coordination structure, comprising:

a support material;

a plurality of reactive catalyst particles disposed on the support material, the reactive catalyst particles comprising a plurality of catalytically reactive atoms including at least one member selected from the group eomprising consisting of noble metals, base transition metals, rare earth metals, and solid non-metals,

the catalytically reactive atoms being arranged so that at least about 50% of a top or outer surface layer of the catalytically reactive atoms have a nearest neighbor coordination number of 2;

an anchoring material comprising at least one type of polymer, oligomer or organic compound that chemically binds at least a portion of the reactive catalyst particles to the support material, at least a portion of the anchoring material being disposed between a bottom layer of the catalytically reactive atoms and the support material,

wherein at least about 50% of the anchoring material is straightchained instead of branched.

S.N. 10/6/8808

1B. (Alternative Amendment) A supported reactive catalyst having a controlled coordination structure, comprising:

a support material;

a plurality of reactive catalyst particles disposed on the support material, the reactive catalyst particles comprising a plurality of catalytically reactive atoms including at least one member selected from the group eomprising consisting of noble metals, base transition metals, rare earth metals, and solid non-metals,

the catalytically reactive atoms being arranged so that at least about 50% of a top or outer surface layer of the catalytically reactive atoms have a nearest neighbor coordination number of 2;

an anchoring material comprising at least one type of polymer, oligomer or organic compound that chemically binds at least a portion of the reactive catalyst particles to the support material, at least a portion of the anchoring material being disposed between a bottom layer of the catalytically reactive atoms and the support material,

wherein the support material and the anchoring material comprise corresponding functional groups that have been reacted together to form a chemical bond between the support material and the anchoring material,

wherein the chemical bond between the support material and the anchoring material is a condensation reaction product of the corresponding functional groups of the support material and the anchoring material.

S,N. 10/618808

31. (Proposed Amendment) A supported reactive catalyst having a controlled coordination structure, comprising:

a support material;

a plurality of reactive catalyst particles disposed on the support material, the reactive catalyst particles comprising a plurality of catalytically reactive atoms including at least one member selected from the group comprising consisting of base transition metals, rare earth metals, and solid non-metals,

the catalytically reactive atoms being arranged so that at least about 50% of a top or outer surface layer of the catalytically reactive atoms have a nearest neighbor coordination number of 2;

an anchoring material comprising at least one type of polymer, oligomer or organic compound that chemically binds at least a portion of the reactive catalyst particles to the support material, at least a portion of the anchoring material being disposed between a bottom layer of the catalytically reactive atoms and the support material.